

WHAT IS CLAIMED IS:

- 1 1. A computing system comprising:
2 a circuit board;
3 a first device having a first heat transfer surface;
4 a first heat sink including:
5 a first base thermally coupled to the first heat transfer surface; and
6 a first array of fins thermally coupled to the first base;
7 a second device coupled to the circuit board, the second device having a
8 second heat transfer surface; and
9 a second heat sink including:
10 a second base thermally coupled to the second heat transfer surface;
11 and
12 a second array of fins coupled to the second base and extending at least
13 partially across the first array of fins.
- 1 2. The system of Claim 1, wherein the first device is electrically connected to the
2 second device.
- 1 3. The system of Claim 1, wherein the first device generates heat at a first rate
2 and wherein the second device generates heat at a second greater rate.
- 1 4. The system of Claim 1, wherein the second device comprises a processor
2 assembly including a central processing unit.
- 1 5. The system of Claim 4, wherein the first device comprises a power pod
2 assembly.
- 1 6. The system of Claim 5, wherein the power pod assembly is dedicated solely to
2 supplying power to the processor assembly.
- 1 7. The system of Claim 1, wherein the first device comprises a power pod
2 assembly.
- 1 8. The system of Claim 1, wherein the second array of fins extends on opposite
2 sides of the first device.

1 9. The system of Claim 1, wherein the second heat sink includes a heat pipe
2 extending at least partially across the first array of fins.

1 10. The system of Claim 9, wherein the heat pipe supports the second array of fins
2 over the first array of fins.

1 11. The system of Claim 9, wherein the heat pipe extends at least partially along
2 the second base.

1 12. The system of Claim 9, wherein the heat pipe extends from below the first
2 base to above the first array of fins.

1 13. The system of Claim 1, wherein the first device and the second device are
2 coupled to one another to form a multi-device module adapted to be connected to the circuit
3 board.

1 14. The system of Claim 1 including:
2 a third device having a third heat transfer surface;
3 the third heat sink including:
4 a third base thermally coupled to the third heat sink; and
5 a third array of fins thermally coupled to the third base;
6 a fourth device coupled to the circuit board, the fourth device having a fourth
7 heat transfer surface; and
8 a fourth heat sink including:
9 a fourth base thermally coupled to the fourth heat transfer surface; and
10 a fourth array of fins coupled to the fourth base and extending at least
11 partially across the third array of fins.

1 15. The system of Claim 14 including a central electronic control coupled to the
2 circuit board.

1 16. The system of Claim 14 including:
2 a baseboard coupled to the circuit board;
3 a memory device coupled to the baseboard; and
4 an input/output device coupled to the baseboard.

1 17. The system of Claim 14 including a fan configured to create an air flow across
2 the second device and across the fourth device.

1 18. The system of Claim 1, wherein at least one of the first array of fins is
2 interleaved with the second array of fins.

1 19. A multi-device heat sink module adapted to be connected to a circuit board,
2 the module comprising:

3 a first device having a first heat transfer surface;

4 a first heat sink having a first base thermally coupled to the first heat transfer
5 surface;

6 a second device coupled to the first device and having a second heat transfer
7 surface;

8 a second heat sink having a second base thermally coupled to the second heat
9 transfer surface; and

10 a connector connected to one of the first device and the second device and
11 configured to be electrically connected to the circuit board, wherein at least a portion of the
12 second heat sink extends at least partially across the first heat sink.

1 20. The module of Claim 19, wherein the first heat sink includes a first array of
2 fins thermally coupled to the first base.

1 21. The module of Claim 20, wherein the second heat sink extends at least
2 partially across the first array of fins.

1 22. The module of Claim 21, wherein the second heat sink includes a second array
2 of fins, wherein the second array of fins extends at least partially across the first array of fins.

1 23. The module of Claim 22, wherein the second array of fins extends on opposite
2 sides of the first array of fins.

1 24. The module of Claim 22, wherein the second heat sink includes a heat pipe
2 extending at least partially across the first array of fins.

1 25. The module of Claim 24, wherein the heat pipe extends at least partially along
2 the second base.

1 26. The module of Claim 24, wherein the heat pipe extends from below the first
2 base to above the first array of fins.

1 27. The module of Claim 19, wherein the first device is electrically connected to
2 the second device.

1 28. The module of Claim 19, wherein the first device generates heat at a first rate
2 and wherein the second device generates heat at a second greater rate.

1 29. The module of Claim 19, wherein the second device comprises a processor
2 assembly including a central processing unit.

1 30. The module of Claim 29, wherein the first device comprises a power pod
2 assembly.

1 31. The module of Claim 30, wherein the power pod assembly is dedicated solely
2 to supplying power to the processor assembly.

1 32. The module of Claim 19, wherein the first device comprises a power pod
2 assembly.

1 33. The module of Claim 18, wherein the second heat sink includes:
2 a heat pipe extending above the first heat sink; and
3 an array of fins thermally coupled to the heat pipe and supported by the heat
4 pipe above the first heat sink.

1 34. A processor module comprising:
2 a processor configured to be connected to a circuit board, the processor having
3 a first heat transfer surface;
4 a power pod electrically connected to the processor to supply power to the
5 processor, the power pod having a second heat transfer surface;
6 a first heat sink thermally coupled to the second heat transfer surface; and
7 a second heat sink thermally coupled to the first heat transfer surface, wherein
8 the second heat sink extends at least partially across the first heat sink.

1 35. The module of Claim 34, wherein the second heat sink extends completely
2 across the first heat sink.

1 36. The module of Claim 35, wherein the second heat sink extends on opposite
2 sides of the first heat sink.

1 37. A multi-device heat sink module for being connected to a circuit board, the
2 module comprising:
3 a first device emitting heat;
4 a second device emitting heat;
5 a first means for dissipating heat emitted by the first device; and
6 a second means for dissipating heat emitted by the second device, wherein the
7 second means extends at least partially across the first means.

1 38. The module of Claim 37, wherein the first device comprises a processor and
2 wherein the second device comprises a power supply supplying the processor with power.

1 39. A heat dissipating arrangement comprising:
2 a first heat emitting device;
3 a second heat emitting device; and
4 a first heat sink thermally coupled to the first device, wherein the first heat
5 sink extends on opposite sides of the second device.

1 40. The arrangement of Claim 39 including a second heat sink thermally coupled
2 to the second device, wherein the first heat sink extends on opposite sides of the second heat
3 sink.

1 41. A first heat sink for use with a first heat emitting device, a second heat
2 emitting device and a second heat sink thermally coupled to the second heat emitting device,
3 the first heat sink comprising:
4 at least one heat dissipating structure configured to be thermally coupled to the
5 first heat emitting device while extending at least partially around and on opposite sides of
6 the second heat sink.

1 42. A first heat sink for use with a first heat emitting device, a second heat
2 emitting device, and a second heat sink thermally coupled to the second heat emitting device
3 and having a plurality of fins, the first heat sink comprising:
4 at least one heat dissipating structure configured to be thermally coupled to the
5 first heat emitting device while extending at least partially across the plurality of fins of the
6 second heat sink.

1 43. A method for dissipating heat from a first electronic device positioned
2 proximate a second electronic device, the method comprising:
3 directing heat generated by the first device across and around at least a portion
4 of the second device so as to dissipate heat on opposite sides of the portion of the second
5 device.

1 44. The method of Claim 43, wherein the second device includes a first array of
2 heat dissipating surfaces and wherein the method further includes nesting the first device
3 within the first array of heat dissipating surfaces.

1 45. The method of Claim 44, wherein the second device includes a second array of
2 heat dissipating surfaces, wherein the method includes nesting the second array of heat
3 dissipating surfaces within the first array of heat dissipating surfaces to dissipate heat on
4 opposite sides of the second array of heat dissipating surfaces.